

# Learning strategies of Deaf and hearing impaired students in higher education

**Joan Fleming and John Hay**

School of Humanities, Languages, Social Sciences

[The report below is a summary of a longer document. For further details, please contact the authors]

Terms used in this document

BSL – British Sign Language - the language of the Deaf Community of Britain

CACDP – Council for the Advancement of Communication with Deaf People

‘Deaf’ (capital ‘D’) – indicating membership of the signing Deaf community

Profoundly deaf – indicating that a person has a hearing loss of over 100 decibels across the speech frequencies

SSE – Sign Supported English

## Background and rationale

In the first period of research for this project, prior to looking at the learning strategies of Deaf and hearing impaired students, our own learning styles and research methods had to be addressed.

We are a cross-cultural research team consisting of Deaf and hearing researchers and this has had a considerable impact on our approach and work. We work in two languages; our main communication mode is Sign Language and our recording of knowledge has been in written English, although we may later record knowledge in sign language through video. Therefore one of us is always operating in his or her second language.

‘How can research on deaf children and adults be protected from the structural paternalism that dictates the training of professional people ... The single most effective remedy, it seems to me, would be to involve deaf people themselves...’ *Lane (1984)*

Within the context of our work it has been shown that there is a considerable body of educational research emanating from Higher Educational experiences of deaf students in the United States of America where deaf and hearing researchers have been publishing since the early 1960’s. The major areas of research into deafness and deaf people in Great Britain, until Deaf Studies emerged in the 1980s, had been confined to Audiology and English Speech and Language acquisition. Research findings were usually published in enclaves of the teaching profession. An important change of emphasis arrived in publications from the USA questioning educational provision for deaf children and subsequently, young adults. Marschark (1993) reported that ‘If there is one thing that the study of deafness has taught us, however, it is that language is not synonymous with speech; and it is assumed here that American Sign Language (ASL) or any other regular, socially agreed-on means of communication can be just as effective for normal development as is speech.’

The authors have observed that students whose parents are hearing, and coming from oral schools (schools which primarily use lip-reading, residual hearing and speech and not signing), have been presenting themselves as sign language users. These students appear to have learned sign from their peer group, which includes children of Deaf parents, whose family language is Sign.

At the University of Wolverhampton, deaf undergraduates are accepted to study a wide range of subjects within the institution and integrated with other students who are hearing. Provision of specialist support consisting of BSL/English interpreting, note-taking and English one-to-one tutorials has existed in this university for ten years.

For decades we as researchers and teachers in Britain have relied on the findings of American academics with reference to the learning strategies of deaf students within the HE systems of the United States. However, the model of the deaf learner in the States may possess wide cultural differences which may have led us to misguided assumptions. The writers of this report believe primary research here in the U.K. may reveal fundamental differences and/or valuable parallels, thus spurring us to undertake research using Wolverhampton deaf students as a considerable sample.

In order to inform practices in the teaching of deaf students within Higher Education, approaches to the learning strategies of deaf students must be recorded and analysed. The traditional provision and practice found in Oral Education may not be deemed sufficient or appropriate for deaf students in a HE learning environment, for example how could a deaf student lip-read in a crowded lecture theatre or how could they take notes while lip-reading lecturers?

## Learning theory and deafness

Like many researchers, consumers of deaf education and professionals working with deaf people, we might assume that learning is altered by deafness. It also raises the issue that needing specific modes of access to communication rather than deficit or disability needs alters a deaf individual's learning strategy. The deficit model is one adopted by many hearing educators who assume that a hearing loss is a deficit rather than a difference.

Learning and deafness has taken precedence as an area of psychological study and it is only in recent times that educationalists have sought the views of deaf students themselves. In seeking the views of deaf students, the writers have acknowledged that the deaf students may perceive themselves as deaf in a medical sense, whereas profoundly Deaf signing students may perceive themselves to be members of the Deaf Community in Great Britain, a cultural rather than medical model of deafness. In the case of the latter group, the cultural model of deafness pertains (Corker, 1998). However, it is acknowledged that as 90% of deaf children have hearing parents, entry into the community is delayed. *'At the outset, it should be acknowledged that any attempt to provide complete and accurate descriptions of deafness and deaf people is unlikely to proceed. Deaf individuals vary widely, in some ways perhaps even more widely than the population of normally hearing individuals'* (Marschark, 1993).

## The research

For the purpose of this research, a total of 113 past and present deaf and partially hearing students of the University of Wolverhampton from 1991 to 2003 were invited to participate in a study to research the learning strategies of deaf students (68 graduates and 45 undergraduates). The sample of subjects actually engaged in the study was 22 (11 females and 11 males).

When students are asked to identify their deafness as part of this study, the terms they used may vary according to factors such as:

- Differences in whether deafness is hereditary or adventitious

- Physiological factors related to deafness (e.g. degree and quality of hearing loss)
- Born into deaf or hearing families
- Quality and type of education
- Extent of linguistic and non-linguistic interpersonal experience

There are known Deaf-related variables that could affect student learning strategies. Depending upon level and onset of deafness, the subjects have a combination of the following:

### **Mild Deafness**

Hearing or deaf family members

Aided hearing

Naturally acquired English speech and inner English language

Mainstream Education

### **Partial deafness**

Hearing or deaf family members

Aided hearing

English speech accessed through Lip-reading

Spoken English altered by deafness

Speech therapy

Supported learning of written English and reading

Second Language learning of BSL

Special or mainstream education

### **Mild, partial or profound adventitious deafness**

Deaf or hearing family

Aided or non-aided hearing

Speech reading skills

Spoken English altered by deafness

Speech therapy

Establish English skills

First or second language learning experience of BSL

Special or mainstream education

### **Profound deafness Type 1**

Deaf family

Aided or non-aided hearing

Ability or non-ability to lip-read

First language BSL i.e. Full exposure to sign language – BSL or Signed English

Formal BSL qualifications

Spoken “deaf” English

Established or near – established written and read English

Special or mainstream education

Experience or non-experience of Interpreter services

### **Profound deafness Type 2**

Hearing family

Aided or non-aided hearing (analogue or digital aids, cochlear implanted aids or bone conductor implanted aids instead of the former)

Ability or non-ability to lip-read

Special or mainstream education

Fragmented exposure to sign language i.e. less than established sign

Some formal learning of BSL

Spoken “Deaf” English

Fragmented expression and reception of written English

Special or mainstream education

Experience or non-experience of interpreter service

## Profiles of Students

Deaf students, who enter university perceived as **semi-independent learners** using communication services, but without learning or language support, are in three distinct groups:

### Group 1

Students who are partially hearing but who have opted to use BSL as their communicative language. These students seem to possess enough 'hearing' to concept build, understand information, reflect upon information they have learned and express such knowledge through the medium of English. The learning processes of these students mirror the surface and deep learning processes of hearing students.

### Group 2

Signing Deaf students whose deafness is adventitious, but who were 'hearing' for a considerable time during which their learning processes mirrored those of their hearing peers until the onset of deafness. These students have a strong foundation of English Language established concepts and learn sign language as a second language. They retain learning processes utilising their first language English and obtaining the same processes later in their second language BSL.

### Group 3

Profoundly deaf students with educated families, where the first language of the whole family is British Sign Language [BSL]. These students have established concepts and a full sophisticated sign language and they have acquired English as a second written, not spoken, language. They have developed the mechanism of translating efficiently their academic knowledge into written English. These students are the only group whose learning may be compared to the learning processes of hearing students from other countries.

Profile of Deaf Students who enter University perceived as **non-independent learners**:

These students have 'hearing' families whose spoken English is not accessible to the deaf family member, in this instance the student. This group of students may have been taught English as if they were hearing and they have not accessed aurally transmitted information. These students would say BSL is their first language, but have had varied experience of it and have not been taught BSL as a curriculum subject. They may have attended some CACDP classes but may not have studied sign language during their school lives.

## The outcomes

It was envisaged that findings would reveal learning strategies dependent upon requirements necessitated by deafness as well as relative to deaf learners' attainments and personal preferences. It was hoped that results would show that learning is altered by the culture of the learning environment, in addition to the family background of the deaf subjects. The nature of the students' independent learning is revealed as an important feature.

### *Societal Status of deaf subjects*

- The majority of students in the study were profoundly Deaf and 75% see their preferred language mode as a variation of Sign Language (BSL, SSE, SEE)
- Most students were required to speak at school but had changed their communication mode upon leaving school.
- 70% of students had attended a specialist school and were taught by qualified teachers of the deaf

### *Significant demographics*

- 80% of their parents had professional employment status
- 48% of the group had deaf family members (parents or siblings)
- 24% only use sign language of any mode in communication within family circles

*Significant communication strategies*

- 60% of students use BSL/English interpreters
- 75% identified sign as their preferred language mode
- 50% used note-takers
- 51% used English Support tutorials
- 80% of males and females (combined) selected English for Deaf Learners modules
- 98% females studied BSL modules while only 5% males opted for BSL modules

*Perspectives on support mechanisms*

- Deaf students are using specialised support services as available and selecting English for Deaf Learners modules rather than attending mainstream modules
- Some signers are opting for 'live' notes rather than interpreted information
- Female students (98%) are opting to obtain sign language qualifications via modules
- Male students (95%) in contrast are not opting to further their academic sign language skills

*General Teaching & Learning features found*

- Only two out of twenty two students reported that they always understood assignment tasks
- Nine said that they never understood their tasks, however eleven said they sought assistance
- Eleven students revealed that they translated written English into Sign language
- Eleven related that reading required texts presented difficulty
- Ten commented that English comprehension did affect their grades

*Issues arising from Independent Learning*

- 66% of deaf students said that they did not cope with their workload
- 65% mentioned that they could not approach lecturers
- 33% stated that they enjoyed challenges
- 45% of males were happy with their grades but only 25% of females
- 75% of students reported that they received useful written feedback from lecturers

*Student Aspiration*

- 70% of students had clear aspirations for their future and thought that their course of study would lead or had lead them to a linked career
- The graduates in the study group had achieved 2:1 and 2:2 Honours degrees
- Graduates were employed or in continuing education
- No-one reported unemployment

**Future developments**

- Challenge the problems that deaf students face in understanding the language of assessments
- Enable deaf students to approach lecturers and offer them flexible workloads
- Encourage all deaf students to develop and study academic English and BSL
- Encourage male students particularly to study BSL to enhance their use of BSL/English interpreters

**Future research suggestions**

- Discover how and why deaf students who went to oral/aural schools, and whose family language is generally speech, opt to use sign language in HE settings
- Who then is teaching deaf students sign language?
- Does peer group acquisition of BSL exist?
- Does Chomsky's LAD\*\* exist for deaf people?
- Is English enhancing or blocking deaf students' independent learning?



- Does integration within HE establishments enable deaf students to achieve educational success?

\*\* Chomsky (1960) Innate Language Acquisition Device 'LAD'

## Conclusions

The responses concerning the students' independent learning leads to 'pause for thought' in the very existence of institutional provision and true access. In this particular university deaf students have a wide range of services as outlined in the study and yet a significant number of students comment they find approaching lecturers difficult. Only two in the sample reported that they understood written briefs. It could be that an integrated HE setting is a kind of compromise which will always pose barriers. Perhaps true access to HE can only be within specialist institutions.

Even though students are using the range of communication provision and specialised English language learning within this institution, they still remarked upon their inability to understand texts. Researchers in the USA have found that deaf students' understanding, reflection and expression of knowledge necessitate full language acquisition, competent fluency and advanced proficiency. Learning strategy or ability cannot, generally be separated, from language acquisition, however as Marschark suggests educators should look at the whole person when, '...discerning and disentangling abilities that in some contexts are considered linguistic, in some contexts social, and in some contexts cognitive.'

Marschark (1993)

Social contexts suggest access to sign language while fostering cognitive processes would suggest access to both sign language and English language. Deaf students themselves, as well as HE providers, have accepted sign language interpretation as almost standard provision. However, the choice or mode of sign language as delivered by deaf lecturers and utilised by interpreters, and as described by students in this study may throw into discussion in the use of British Sign Language which is currently promoted by non-academic deaf groups. H.E. students are opting for SSE, which is sign language, expressed using a form that adopts the word order of English language. The preference of using written English is emphasised in the words of Jordan, '..... In order to take advantage of the emerging technologies, deaf people have to be highly literate. They must be able to read and write fluently! It is essential that students become highly skilled in reading and writing English..... " So obviously literacy is a high priority.' (Jordan, 2003)

English language learning goes beyond specialist English lessons. An essential if not crucial finding of this study, in what is arguably a small sample, was that students reported they could not understand assignment briefs. If it is believed deaf students should work towards literacy, then written materials should not be simplified, but rather rendered accessible. In the spirit of the Special Educational Needs Disability Act 2001 (SENDA), now implemented in H.E., generic language and accessibility should be addressed. Support tutors and interpreters may be using precious funding and time demystifying obfuscated assignment briefs, which could in their creation contain accessible information expressed in academic yet clear terms.

## Students' Views

One of the aims of this report was to reflect the students, their learning strategies and their ideas upon provision, their language and identity. In the light of the Governmental recognition of BSL in May 2003, students were asked for their comments as to how such recognition would influence their choice of language in H.E. studies. There are interesting responses showing great contrast.

*"Well, seeing that BSL is now recognised as a language by the government, then I reckon that any person that uses a language should have the freedom to communicate in their language"*

Deaf student from a hearing family

*"It is up to all Deaf to match up with hearing by sitting down in examinations without BSL support"*

Deaf student from a deaf family

Perhaps it is not too obvious to restate that both of these students are profoundly deaf, both are bi-lingual but the first student, from a hearing family, recognises his or her right to sign language while the second, having grown up with sign in a deaf family, wishes deaf people to have linguistic independence of which English is an element.

## Post-Project Activities

- The researchers have been asked to organise a language-learning Symposium within reference to our methodologies used to teach English to deaf learners.
- Our project findings will be submitted to the research bodies of British Association of Teachers of the Deaf, Deaf Worlds and The Oxford Journal of Deaf Studies
- An invitation to present the paper on the findings of this study has been extended by Charles University, Prague, Czech Republic for its Teacher-Training Seminar in August 2004.
- City University of London seeks our collaboration for their year-long research on learning styles of deaf students in both FE and HE (September 2003)

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## Appendix 1

[For reasons of space it is not possible to produce the full questionnaire here and only the section headings are detailed. Please contact the authors for further details.]

### **Questionnaire: Learning Strategies of Deaf and Hearing Impaired Students in Higher Education**

#### SECTION A: Personal Details

This section included questions on previous schooling and family background

#### SECTION B: Use of communication & learning support

This section asked about student use of BSL/English Interpreting: Note-taking: Lip-speaking: English Support tutorials: Study Skills: Speech to text: Electronic Note-taking: Loop system

It also asked for information about modules studied.

#### SECTION C: Your own learning strategy

This section asked for agreement / disagreement about learning statements, with special reference to independence in study

#### SECTION D. Assessment results

This section asked for student responses to their assessments

#### SECTION E. Support services

This section asked about student use of university support services

#### SECTION F. My future and aspirations

This section asked about student aspirations after university

#### SECTION G. The Disability Discrimination Act

This was an open section asking for student opinion on university use of BSL